

Abstract P1896 – Table 1. Distribution of ischaemic stroke lesions

	Anterior territory			Posterior territory				Multiple territories
	ACA	MCA	Multiple locations	PCA	Cerebellum	Brain stem	Multiple locations	
All patients (n=1902)	85 (4.5)	1273 (66.9)	45 (2.4)	226 (11.9)	141 (7.4)	102 (5.4)	30 (1.6)	51 (2.7)
Previous AF diagnosis (n=1450)	59 (4.0)	968 (66.7)	32 (2.2)	182 (12.5)	100 (6.8)	83 (5.7)	26 (1.7)	37 (2.6)
New AF diagnosis (n=452)	26 (5.7)	305 (67.4)	13 (2.8)	44 (9.7)	41 (9.0)	19 (4.2)	4 (0.8)	14 (3.1)

All data are reported as absolute number and percentage. Abbreviations: ACA, anterior cerebral artery; AF, atrial fibrillation; MCA, middle cerebral artery; OAC, oral anticoagulant; PCA, posterior cerebral artery.

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Distribution of ischaemic strokes in patients with atrial fibrillation: the FibStroke Study

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**Background:** Previous data on the localisation of ischaemic strokes in patients with atrial fibrillation (AF) are scarce.

**Purpose:** To determine the relative frequency of affected cerebrovascular territories in patients with AF suffering their first ever ischaemic stroke.

**Methods:** The multicentre FibStroke Study included 2945 patients who suffered their first ever ischaemic stroke during 2003–2012 and were diagnosed with AF either before the event or within 30 days after the event. In 1043 patients, the location of the ischaemic lesion was not recorded, and thus 1902 patients (1450 with AF diagnosis before and 452 with AF diagnosis at the time or after the stroke) were included in the current analysis.

**Results:** The median age of the patients was 78.5 [interquartile range: 71.6–84.3] years, 1089 (57.3%) of them were women, their mean CHA2DS2-VASc score was 3.5 (95% confidence interval: 3.4–3.6) and 635 (33.4%) were receiving oral anti-coagulant (OAC) drugs. The distribution of ischaemic lesions is presented in Table. The localisation of the ischaemic lesions between the anterior (1352 (71.1%) patients) and the posterior (499 (26.2%) patients) cerebrovascular territories was not affected by the timing of AF diagnosis ( $p=0.38$ ), use of OACs ( $p=0.63$ ) or the CHA2DS2-VASc score ( $p=0.15$ ). Similarly, within the anterior and posterior territories, the timing of AF diagnosis ( $p=0.61$  and  $p=0.14$ , respectively), use of OACs ( $p=0.06$  and  $0.07$ , respectively) or the CHA2DS2-VASc score ( $p=1.00$  and  $p=1.00$ , respectively) affected not the lesion localisation. Within the anterior territory, altogether 750 (53.5%) strokes were located in the left hemisphere and 3 (0.2%) were bilateral. The timing of AF diagnosis ( $p=0.89$ ), use of OACs ( $p=0.97$ ) or the CHA2DS2-VASc score ( $p=0.47$ ) had no effect on the relative location of the ischaemic lesion between the hemispheres.

**Conclusion:** The distribution of ischaemic strokes in AF patients was for the first time comprehensively reported in the current work. The timing of AF diagnosis, use of OAC drugs or the CHA2DS2-VASc score did not affect the lesion distribution.

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Impact of gender difference on clinical characteristics and late recurrence in patients with small left atrium after pulmonary vein isolation

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**Background:** Previous studies have reported that females had a worse cardiovascular risk profile and more frequent incidence of heart failure with preserved ejection fraction in atrial fibrillation (AF) patients. On the other hand, enlarged left atrium (LA) size is an established predictor for recurrence of AF after PVI. We occasionally experience recurrence of AF in patients with small LA. In small LA patients who underwent PVI, the impact of gender difference on clinical characteristics and late recurrence remains unclear.

**Methods:** We enrolled 266 consecutive patients with small LA (<40mm) who underwent PVI from April 2010 to February 2017. Average follow-up period was 41 months. We compared the incidence of AF/AT late recurrence (3 months after PVI) and various predictors including age, gender, hypertension, diabetes mellitus, CHADS2 score, brain natriuretic peptide (BNP) level, left ventricular end-

Clinical characteristics and outcome

	Males (N=156)	Females (N=110)	P value
Age, yrs	63.1±11.8	66.4±9.23	0.014
CHADS2 score 0–1, n (%)	129 (82.7)	91 (82.7)	0.994
Paroxysmal AF, n (%)	138 (88.5)	102 (92.7)	0.249
BNP, pg/ml	67.8±93.2	100.8±144.0	0.026
LVDd, mm	47.4±3.78	44.5±3.52	<0.001
LVDs, mm	29.2±3.79	26.4±3.35	<0.001
LVEF, %	67.6±8.26	70.8±6.45	<0.001
LAD, mm	36.9±3.13	36.8±2.90	0.681
TDI E/e'	8.80±3.00	11.1±4.00	<0.001
Late recurrence	28 (17.9)	35 (31.8)	0.009

diastolic and end-systolic diameter (LVDd, LVDs), left ventricular ejection fraction (LVEF) and tissue Doppler index (TDI) E/e' between males and females.

**Results:** Males and females consisted of 156 (58.6%) and 110 patients (41.4%), respectively. Age, and BNP level were significantly higher in females than males. E/e' was significantly higher in females than in males. LVDd and LVDs were significantly smaller in females than males due to possible smaller body. LVEF was higher in females than males but the both values were normal. As a result, the incidence of late recurrence was higher in females than in males (table).

**Conclusion:** In the real world, small LA female patients with AF may have more impaired cardiac diastolic function which may correlate with higher AF recurrence after PVI as compared to males.

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Soluble urokinase plasminogen activator receptor (suPAR) is an independent risk factor for stroke in patients with atrial fibrillation

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**Introduction:** Soluble urokinase plasminogen activator receptor (suPAR) is a biomarker of chronic low-grade inflammation and a potent predictor of cardiovascular events. We hypothesised, that plasma suPAR levels would predict incident stroke in a cohort patients with atrial fibrillation (AF)

**Methods:** In 2,548 unselected, consecutively admitted medical patients with prevalent AF, suPAR was measured upon admission (median suPAR 3.8 ng/ml, inter quartile range (IQR) 2.6–5.7 ng/ml).

**Results:** During a median follow-up of 183 days (IQR 42–401 days), 146 (5.7%) patients were diagnosed with incident stroke. Plasma suPAR levels significantly predicted incident stroke (HR per doubling of suPAR: 1.51 95% CI 1.23–1.87,  $p=0.0001$ , adjusted for age and sex). After further adjustment for CHA2DS2-VASc score, plasma c-reactive protein (CRP), plasma creatinine and blood haemoglobin levels, the result remained essentially unaltered (HR per doubling of suPAR 1.50 95% CI: 1.17–1.94,  $p=0.017$ ). The result was similar across CHA2DS2-VASc scores ( $p$  for interaction = 0.12)

**Conclusion:** In patients with prevalent AF, plasma suPAR is a powerful predictor of subsequent stroke. Stroke risk increases 50% per doubling of plasma suPAR, independently of conventional risk prediction algorithms. Plasma suPAR may be valuable for further stroke risk stratification of patients with AF, especially patients with low CHA2DS2-VASc scores.

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Relationship between dietary salt intake and atrial fibrillation in the general population

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**Background:** Restriction of dietary salt is recommended as an important modification of lifestyle, because excess salt intake is associated not only with hypertension but also with cardiovascular diseases independently of its effects on blood pressure. Atrial fibrillation (AF) is a common arrhythmia and several conditions have been proposed as risk factors contributing to the onset of AF. However, the impact of excess salt intakes on the incidence of AF has not been intensively studied.

**Purpose:** The present study was designed to test the hypothesis that dietary salt intake has a close relationship with AF and predicts new onset of AF in the general population.

**Methods:** Dietary salt intake were estimated using a spot urine by a previously reported method in 12850 subjects (male 7821, mean age 52.9 years) who visited our hospital for a yearly physical checkup. First, a cross-sectional analysis for the evaluation of a possible relationship between salt intake and AF was performed. Then, subjects without AF at baseline ( $n=12769$ , male 7749, mean age 52.8 years) were followed up for the median of 1821 days with the endpoint being the new onset of AF.

**Results:** Salt intake was 12.1±3.1 g/day in male and 8.3±2.2 g/day in female subjects at baseline. In cross-sectional analysis at baseline, salt intake was significantly higher in subjects with ( $n=81$ ) than without AF (13.1±3.3 vs. 10.6±3.3 g/day). In the follow-up study, 87 subjects developed AF (1.44 per 1000 person-year) with the incidence being more frequent in male than female subjects (2.10